/21 cont./

137 GUAYABO /guava/. -- This fruit-bearing tree is found
82 wild and cultivated; it is of medium size, and the fruit, when
[245] ripe, is yellow on the outside and purple on the inside, and its bittersweet flavor is very pleasant and laxative. The green fruit and the roots are astringent; the Chiriguano know it by the same name. The wood has no use at all, and even if it
[262] did, the Indians would not use it because it produces edible fruit. They regret it when any of these trees and others, like the algarrobo, are destroyed.

GÜEMBÉ. -- This plant thrives on the trunks of high trees, where it puts its root, and others which penetrate the ground
[492] hang down from there. The roots and lianas are dark in color; very strong and durable halters are made from its bark; it is not found everywhere. One encounters it from the left bank of the Parapiti River; its fruit is similar to that of maize, for which reason it is called maize of the air, and it is edible.

HIGUERA AMERICANA /American fig/. -- This is the
[262] guapoy of the Chiriguano and the bibosi of the populace; al-
[797] though the fruit is rather sour, it is edible. Bats like it, and it is annoying to have this tree near the dwellings; it has a milky juice like the common fig tree, which, applied to wounds,
[245] heals them. In addition to the above fig tree, there is the
[439] common one which flourishes with very little care, in the towns,
[431] especially the Mission ones; it is widely cultivated by the natives and its fruit is used by them for gifts and trade with the whites.

●244 MANDIOCA. -- This plant is called "Mandio" or "Mandiporeys" by the Chiriguano Indians. A little book written by a Jesuit missionary of the old Paraguay missions relates that this plant was left to those Indians by Saint Thomas the Apostle who, according to their tradition, came here to preach the doctrine of the Redeemer. Mandioca is
[252] an excellent food and very digestible; it is eaten boiled,
[262] roasted, and fried in lard. It is a plant cultivated by whites and by Indians.

/28 cont./

137 824 There is another small caraguata which invades wide areas of land, preventing any animal from entering there, because it has spines on the bottoms of the leaves. In times of scarcity [262] its root is food for the poor Chiriguano; the root contains a little starch which has the taste of mandioca, but it requires [283] great effort to pull it up. The leaf of this tilandsia is also good for making cord.

Finally, there is a third one which flourishes abundantly in trees and on the rocks of the hills, but which has no peculiar properties; it is large because of its leaves, which measure up to one meter in length. The plant is thick, the leaf fleshy, and it is used to decorate the streets with arches during processions. The aloe is similar to the second type of tilandsia, but aloe leaves are wide and thick, full of juice, while those of the tilandsia are slender, arched, and dry. The aloe is not abundant; only an occasional shrub or plant is found.

● 244 /29/ TOMATO. -- This plant which produces fruits so pleasant and useful to the culinary art flourishes exuberantly in these lands; the fruit from each plant is abundant and is produced the year round when some care is taken to protect the plant from the cold or from the light frosts which customarily [237] fall in June and July. To do this it suffices to pile up dry cow dung in two or three places in the tomato patch and set them [177] afire. True tomato plants are also found in the woods, but it is presumed that some bird must have carried the seed to such places; the tomato is a plant which has been brought into the Chiriguano country, as is the case with the onion, the sweet potato, and the cabbage.

222 In the woods there is a kind of tomato in the wild state, which is somewhat similar in appearance and taste, but which is quite different from the true one; it is picked green and allowed to ripen in a room on top of a piece of wood; in a [244] few days it turns red, which is a sign that it is ripe. The chili pepper also produces abundantly and with little care; it is a plant which lasts up to three years if care is taken to prune it, and the second and third years the fruits are very hot. Another kind of small, round chili pepper abounds in the woods and bears spontaneously; it is called arivivi by the whites and "quii rai" by the Chiriguano. It is hot, and some cure sickness,

/242 cont./

The seventh type has no peculiarity. It is called Cachinchi, which in the language means curly, and it actually is; the kernel is rather small at the end, but not at the beginning, and in the middle it is very soft; it contains considerable saccharine, and they use it for parched maize. They also have the Abati guayeta, then the Abati chore, which they use for parched meal, and finally they have the Saimpini, gray, very good for parched maize because of its softness (2).

[177] 2. It appears that formerly these Indians did not have the Abati guayeta. It is very probable that it was introduced after the Conquest, or as soon as they had any relations with the whites.

262 Maize is a very common food for the Chiriguano Indian, and he eats it in different ways, but in times of plenty one tires of eating the same thing, like the Hebrews, who in the desert had become tired of eating manna. They remedy this difficulty with the Intina, side dishes /companage.

The first, Abati tina, is the Cumanda, French bean /alubia/; there are also 11 types of French beans, or [263] cumanda. All are eaten with salt or without /243/ it, with maize meal, with parched maize, or without them. Here they are; Cumanda háigũe, bean with a yellow kernel; Cumanda sacuayu, which literally means bean with yellow eye; Cumanda úú, black bean; Cumanda gũiraya, which literally means bean owner of the trees, because it is a climber; Cumandandi, white bean; Cumanda pucu, long bean with red kernel; Cumanda mi, small bean. This one is not small because of its grain, but because of the plant, and it is the one that the whites call yellow poroto; Cumandansi, sour bean; Cumanda guasu, large bean, it is because the plant is very thick. There is another called Gũira rupía because it resembles birds' eggs, and, finally, there is Saimpino, which is similar to the gray egg-colored maize (1).

● 244 1. The Cumanda guasu, or large bean, is the

/243 cont./

244 one preferred by the Chiriguano, and he has good reason, as it is quite edible, the least damaging to health, in addition to being the seed which is most resistant to drought. It is very abundant, and as many as four harvests can be taken from it.

262 252 [244] The Chiriguano plants whatever type of beans /judías/ he has or can obtain from his neighbors or companions when he runs short, because only in the case of maize, which he prefers to eat parched and not boiled, does he plant several varieties. All beans /alubia/ are good to the Indian because of the use that he makes of them, which is to boil them and eat them, to roast them under hot ashes with their pods, or, by making a hole in the ground, to heat it and burying the pods there so that they will cook.

244 If the Chiriguano frequently lacks beans to mix with the maize, it is unlikely that he will be without gourds, which grow with little cultivation and which are so resistant to drought; it is also extremely easy for him to plant this food, so much so that women and children devote themselves to it, because not many plants are needed in a plot for an abundant harvest.

244 262 [415] Twelve classes of gourds are known, but only five are edible; the other seven are used for matés. The edible ones are the following; Andai, Gũindaca guasu, Gũindaca mi, Gũindaca mi guasu, yiquisigua; the latter has an edible interior and the exterior is useful for domestic purposes, to keep 249 any object in its hard shell. The gourds that serve for matés are Iá, true maté; Iá pua, round maté; Iámpe, flattened maté; /244/ Iá guasu, large maté; Iá-rai, small maté, Iá pucú, long maté, and Iá pani, twisted maté (1).

1. The Indian does not include in the number of gourds the one the two children used to free themselves from the deluge of water because it was a miraculous one.

5:Nordenskiöld E-5½(1908-1909, 1913) 1920
SF10 Chiriguano SF10
Chane SF8

C 241 water-melons, melons, figs, tuna[1]), oranges, cotton, millet, and reeds for arrow-shafts.

Ce 241 [245] C Ce [244] C Ce [177] [262] Bananas are not cultivated. Among the Chané at the Rio Parapiti the sweet-potato is the most important cultivated plant. Of the plants mentioned, the sugar-cane, the melon, the watermelon, the fig, the orange and the millet are not American. All those cultivated plants which have been introduced by Europeans are of slight importance to the Indians. I have never seen mandioca cultivated, but I have heard that it is to be met with in the fields of these Indians. As a staple food of the people it is of no importance here.

C Ce 412 177 Iron spades bought from the Whites are the tools employed nowadays. Very occasionally one still sees wooden spades. In Part I I have published a map of the geographical distribution of the spade.

The spade in S. America is evidently a western element of culture, i. e. the idea of fitting on a more or less broad blade to the lower part of the digging-stick is plainly derived from the western area of civilization.

Whence the Chiriguano got the idea of the shapely handles I do not know. They are too shapely for the art to have been derived from the Whites. They have obviously a long evolution behind them, and it is very probable that they had their origin in the Mountain area of civilization.

Hoes with iron blades occur. The Indians have got them from the Whites. I have not seen any primitive hoes, although we are here on the border of the area of distribution of the genuine American hoe[2]).

The Chiriguano and Chané use a small implement for removing the corn from the corn-cobs which I have described in Part I. P. 32.

C Ce [114] [1]) OPUNTIA.

[2]) It is incorrect to affirm, as WISSLER does, (P. 27) that the hoe was unknown in S. America. Incas had hoes and they are found still among the Quichua.